

Amendments to the Specification:

Please amend page 1, line 1 as follows:

Title of the Invention

Please amend page 4, paragraph [0008] as follows:

b1 [0008] The present invention has been made to solve the above described problems and is aimed at providing an electrostatic chuck having a bonded structure, in which airtightness, bonding strength and corrosion resistance of a bonding layer are good, the problem of bleeding out the bonding material under high pressures at the time of bonding is solved, and further the electrostatic chuck having a bonded structure is good in heat conductivity, shows a small deformation due to temperature change, and is good in flatness of an adsorption (attraction) surface, so that it can be used in applications where high precision and high reliability are required, and providing a method of manufacturing the same.

[Please amend page 4, paragraph [0009] as follows:]

[0009] According to the present invention, there is provided a ~~nan~~ electrostatic chuck having a bonded structure comprising a ceramic electrostatic chuck member, a metal member, and a bonding layer; ~~said the~~ ceramic electrostatic chuck member and the metal member being bonded with ~~said the~~ bonding layer, — wherein ~~said the~~ bonding layer has at least a first most outer bonding layer being bonded to ~~said the~~ ceramic electrostatic chuck member, a second ~~most outer~~ outermost bonding layer being bonded to ~~said the~~ metal member, and a polyimide layer being disposed between ~~said the~~ first and second ~~most outer~~ outermost bonding layers, and each of the first and second ~~most outer~~ outermost bonding layers is made of either a silicone layer or an acrylic layer.

[Please amend pages 5-6, paragraph [0010] as follows:]

[0010] Further, according to the present invention, there is provided a method of manufacturing an electrostatic chuck having a bonded structure comprising a ceramic electrostatic chuck member, a metal member, and a bonding layer; ~~said the~~ ceramic electrostatic chuck member and the metal member being bonded with said ~~beding the bonding~~ layer, wherein ~~said the~~ bonding layer has at least a first ~~most~~ outermost bonding layer being bonded to ~~said the~~ ceramic electrostatic chuck member, a second ~~most outermost~~ bonding layer being bonded to ~~said the~~ metal member, and a polyimide layer being disposed between ~~said the~~ first and second ~~most~~ outermost bonding layers, and each of ~~the most outer~~ first and second outermost bonding layers is made of either a silicone layer or an acrylic layer;

wherein ~~said the~~ method comprises the steps of:

preparing a sheet comprising at least a first ~~most outermost~~ layer, second ~~most outermost~~ layer made of either a silicone layer or an acrylic layer, and an intermediate layer being disposed between ~~said the~~ first and second ~~most~~ outermost layers and made of a polyimide layer, vacuum-packing ~~said the~~ electrostatic chuck member, ~~said the~~ bonding layer, and said the metal layer and said member, the sheet being sandwiched between ~~said the~~ electrostatic chuck member and ~~said the~~ metal member, into a vacuum-packing bag; and heating ~~the~~ thus vacuum-packed electrostatic chuck member, bonding layer and metal ~~layer member~~ under isotropic pressurization to bond them firmly.

Please amend page 6, lines 7-18 as follows:

FIG. 2 is a ~~section explaining~~ sectional view showing the state in which a silicon wafer is held with a bonded structure for an electrostatic chuck according to the present invention.

FIG. 3 (a), FIG. 3 (b), and FIG. 3 (c) show illustratively the steps of a method of manufacturing an electrostatic chuck having a bonded structure according to the

BB1
cont'd

present invention, and FIG. 3 (a) shows a prebonding step, FIG. 3 (b) shows a vacuum packing step, and FIG. 3 (c) shows an isotropic pressurization step.

FIG. 4 is a graph showing the schedules of isotropic pressurization and heating.

Detailed Description of Preferred Embodiment the Invention

Please amend page 7, lines 1-11 as follows:

FIG. 1 shows an embodiment of a bonding layer that is a characteristic feature in an electrostatic chuck having a bonded structure according to the present invention. As shown in FIG. 1, a bonding layer 5 has at least a first ~~most outer~~ outermost bonding layer 1 being joined to a ceramic electrostatic chuck member 10 (see FIG. 2), a second ~~most outer~~ outermost bonding layer 2 being joined to a metal member 12 (see FIG. 2) and a polyimide layer 3 being disposed between the first and second ~~most~~ outermost bonding layers 1 and 2, and each of first and second ~~most~~ outermost bonding layers 1 and 2 is composed of a silicone layer or an acrylic layer.

BB3

Please amend pages 7-8, paragraph [0013] as follows:

[0013] Each member ~~composing~~ comprising the bonding layer used in the present invention will be described. The first and second ~~most outer~~ outermost bonding layers 1 and 2 are comprised of a silicone layer or an acrylic layer. Both of the first and second ~~most outer~~ outermost bonding layers 1 and 2 may be the same acrylic layer or silicone layer, and any one of them may be an acrylic layer and the other may be a silicone layer.

BB4

[Please amend page 8, paragraph [0014], lines 6-12 as follows:]

[0014] The polyimide layer 3 being disposed between the first and second ~~most outer~~ outermost bonding layers 1 and 2 is mainly composed of a polyimide. A polyimide is

by control

a high molecular substance having an acid imide bond in the main chain and preferably has 50 mol % or more of a constitutional repeating unit expressed by formula (1) in the whole constitution of the polyimide.

Please amend page 9, paragraph [0016] as follows:

45

[0016] The acrylic layer ~~is contained~~ contains an acrylic resin as the main component. The acrylic resin is a general term for polymers obtained by polymerizing acrylic acid and its derivatives and includes polymers and copolymers of acrylic acid and its esters, acrylamide, acrylonitrile, methacrylic acid and its esters, and others, and which polymers and copolymers may be crosslinked or non-crosslinked. The silicone layer is ~~contained~~ contains a silicone resin as the main component. The silicone resin is a polymer of a silicide having a siloxane bond as the main skeletal structure. The silicone resin may be crosslinked or non-crosslinked, and has, for example, a constitutional repeating unit comprising of a component of formula (3) and/or formula (4) as the main component.

Please amend page 11, paragraph [0019] as follows:

46

[0019] Moreover, in the first and second ~~most outer~~ outermost bonding layers 1 and 2, and in the polyimide layer 3, particulate or squamous fillers having good thermal conduction may be dispersed in order to improve their heat conduction. As materials of the fillers, ceramics like alumina, aluminum nitride and SiC, and metals like Al are good, and their size is ~~good to be~~ preferably 0.5 μm to 50 μm , and the content of the fillers is ~~good to be~~ preferably 50 vol. % or less.

Please amend pages 12-13, paragraph [0024] as follows:

47

[0024] First of all, using a sheet having at least three layers, in which two ~~most outer~~ outermost ~~layer are comprised of~~ layers comprise a silicone layer or an acrylic layer and a polyimide layer is disposed between them, as a bonding layer, an

4371/1
contd

electrostatic chuck member 32 and a metal member 34 are prebonded to prepare a prebonded body as shown in FIG. 3 (a). Then, as shown in FIG. 3 (b), this prebonded body is vacuum packed into a bag. Vacuum packing can be carried out with a commercially available vacuum packer. With a vacuum packer, the prebonded body is put into, for example, a heat-resistant tubular film 33 both ends of which are open, and one of the openings is blocked up and air is let out from the other opening, then the other opening is blocked to make a vacuum packing of the prebonded body in a sealed state with a bag made of the heat-resistant tubular film 33. Next, as shown in FIG. 3 (c), the vacuum packed prebonded body is heated and cooled under isotropic pressurization in an isotropic pressure device, including an autoclave, and the electrostatic chuck member 32 and the metal member 34 are bonded to manufacture an electrostatic chuck having a bonded structure according to the present invention.

Please amend page 14, paragraph [0027] as follows:

bb

[0027] A sheet having at least three layers, in which the two ~~most-outer~~outermost layers were silicone layers and a polyimide layer was sandwiched between them, was used as a bonding layer 30 in Example 1, and a sheet having at least three layers, in which the two ~~most-outer~~outermost layers were acrylic layers and a polyimide layer was sandwiched between them, was used as a bonding layer 30 in Example 2. After each of the sheets was put between an electrostatic chuck member and a metal member and vacuum packed, and the packed members were held in an autoclave at 120°C under the pressure of 14 atm for 2 hours to be bonded.